



# AL400UL3X - Triple Output Access Control Power Supply/Charger

Rev. 091401

### Overview:

The AL400UL3X multi-output access control power supply/charger is specifically designed for use with access control systems and accessories. The AL400UL3X converts a 115VAC 50/60Hz input into three individually regulated power limited outputs (see specifications).

### Specifications:

- NFPA 72 compliant.
- All outputs are Class 2 rated.
- Input 115VAC 50/60Hz, .75 amps.
- 1.75 amps continuous supply current at 5VDC.
- 1.75 amps continuous supply current at 12VDC.
- 1.5 amps continuous supply current at 24VDC.
- Filtered and electronically regulated outputs.
- 51 mV p/p output ripple.
- Maximum charge current .7 amp.
- Built-in charger for sealed lead acid or gel type batteries.
- Automatic switch over to stand-by battery when AC fails.
- Zero voltage drop when switching over to battery backup.
- Thermal and short circuit protection with auto reset.
- DC output LED indicators.
- AC fail supervision (form "C" contact rated 1 amp @ 28VDC).
- Battery fail and battery presence supervision (form "C" contact rated 1 amp @ 28VDC).
- Power supply is complete with enclosure, cam lock, and battery leads.
- Enclosure accommodates up to two (2) 12AH batteries.

Enclosure dimensions: 15.5"H x 12"W x 4.5"D

### Stand-by Specifications: (Current is specified on AL3XB input).

Output	4 hr. of Stand-by & 5 Minutes of Alarm	24 hr. of Stand-by & 5 Minutes of Alarm	60 hr. of Stand-by & 5 Minutes of Alarm
24VDC / 12 AH Battery	_____	Stand-by = 200mA Alarm = 3.0 amps	_____
24VDC / 40 AH Battery	Stand-by = 3.0 amps Alarm = 3.0 amps	Stand-by = 1.0 amps Alarm = 3.0 amps	Stand-by = 300mA Alarm = 3.0 amps

### Installation Instructions:

The AL400UL3X should be installed in accordance with article 760 The National Electrical Code or NFPA 72 and all applicable Local Codes.

1. Mount the AL400UL3X in desired location. It is recommended to first review the following tables for screw terminals, switch selection and LED status indications. This will greatly facilitate installation hook-up.

#### Carefully review:

**Stand-by Specifications** (pg. 1) **Terminal Identification Table** (pg. 2)

**LED Diagnostics** (pg. 2)

**Note:** It is important to measure output voltage before connecting devices. This helps avoid potential damage.

2. Connect the black and white transformer leads of AL400UL3X-220 to a separate unswitched AC circuit (220VAC, 50/60Hz) (Fig. 1 , pg. 3).

Use 18 AWG or larger for all power connections (Battery, DC output, AC input).

Use 22 AWG to 18 AWG for power limited circuits (AC Fail/Low Battery reporting).

**Keep power limited wiring separate from non-power limited wiring (115VAC / 60Hz Input, Battery Wires). Minimum .25" spacing must be provided.**

3. Connect devices to be powered at 5VDC to the terminals marked [+ Out 3 - ].

Altronix is not responsible for any typographical errors. Product specifications are subject to change without notice.

4. Connect devices to be powered at 12VDC to the terminals marked [+ Out 2 - ].
5. Connect devices to be powered at 24VDC to the terminals marked [+ Out 1 - ].
6. Connect two (2) 12V Stand-by batteries.  
Note: For Access Control applications batteries are optional. When batteries are not used a loss of AC will result in the loss of output voltage. Batteries must be lead acid or gel type if used. Two (2) 12V Stand-by batteries connected in series to terminals marked [+ BAT -] (Fig. 1 , pg. 3).
7. It is required connect supervisory trouble reporting devices to outputs marked [AC FAIL, LOW BAT] (Fig. 1 , pg. 3). Use 22 AWG to 18 AWG for AC Fail & Low Battery reporting. AC Failure will report in 5 minutes.

**Maintenance:**

Unit should be tested at least once a year for the proper operation as follows:

Output Voltage Test: Under normal load conditions, the DC output voltage should be checked for proper voltage level (see power supply output specifications table).

Battery Test: Under normal load conditions check that the battery is fully charged, check specified voltage at the battery terminals and at the board terminals marked [+ BAT -] to insure that there is no break in the battery connection wires.

**Note:** Maximum charge current under discharge is .7 amps.

**Note:** Expected battery life is 5 years, however it is recommended changing batteries in 4 years or less if necessary.

**LED Diagnostics:**

**AL400ULXB - Power Supply**

LED	ON	OFF
AC (Green)	Normal operation.	No AC input.
DC (Red)	Normal operation.	No DC output.

**Terminal Identification Tables:**

**AL400ULB - Power Supply**

Terminal Legend	Function/Description
AC/ AC	Low voltage AC input 28VAC 175VA (Altronix model #T28140).
+ DC -	12VDC 4 amps continuous power limited output. 24VDC 3 amps continuous power limited output.
AC FAIL C, N.O., N.C.	Used to notify loss of AC power, e.g. connect to audible device or alarm panel. Relay normally energized when AC power is present. Contact rating 1 amp @ 28VDC.
LOW BAT N.C., C, N.O.	Used to indicate low battery condition, e.g. connect to alarm panel. Relay normally energized when DC power is present. Contact rating 1 amp @ 28VDC.
- BAT +	Stand-by battery connections. Maximum charge rate 1.25 amp.

**AL3XB - Power Output Module**

Terminal Legend	Function/Description
- INPUT +	24VDC from power supply (AL400ULB).
- OUT 1 +	24VDC @ 1.5 amp continuous power limited output.
- OUT 2 +	12VDC @ 1.75 amp continuous power limited output.
- OUT 3 +	5VDC @ 1.75 amp continuous power limited output.

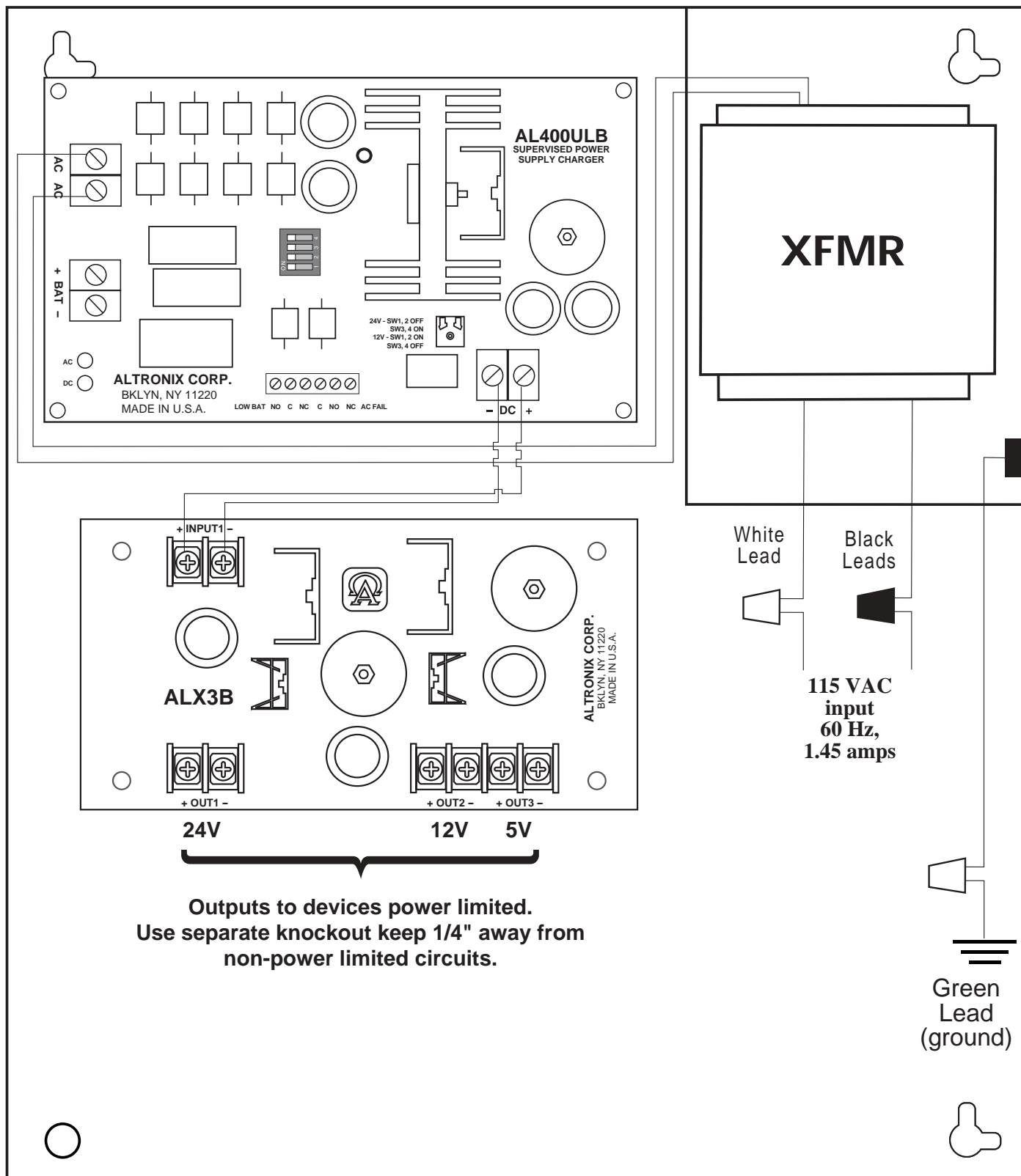
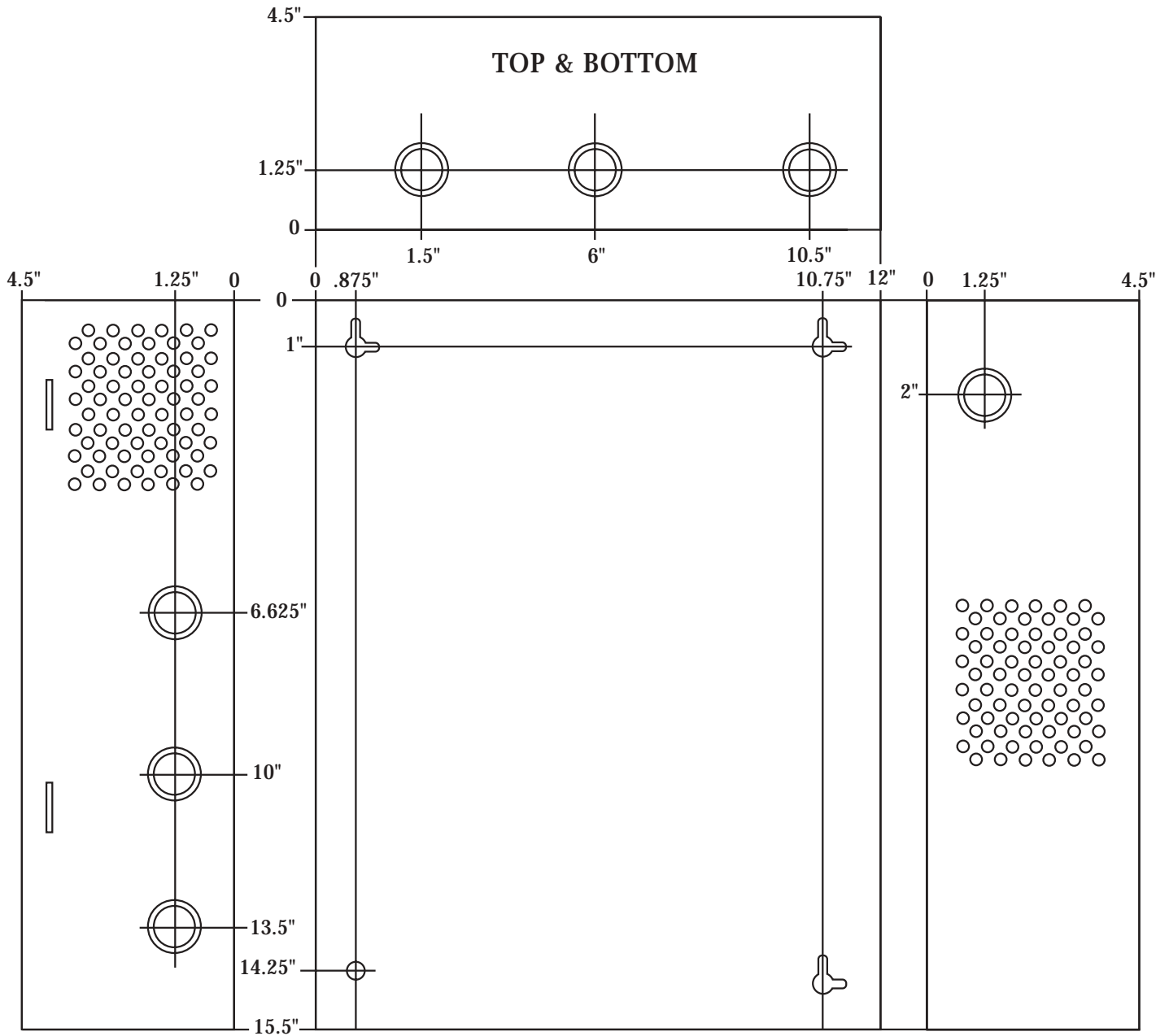


Fig. 1

**Enclosure Dimensions:**

15.5"H x 12"W x 4.5"D



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